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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,820	07/27/2006	Jong-Su Kim	4898-063	6180
23429 7590 10/01/2009 LOWE HAUPTMAN HAM & BERNER, LLP 1700 DIAGONAL ROAD SUITE 300 ALEXANDRIA, VA 22314				
EXAMINER				
RUBY, TRAVIS C				
ART UNIT		PAPER NUMBER		
3744				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/541,820

Applicant(s)

KIM ET AL.

Examiner

TRAVIS RUBY

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-10 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 11 July 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/ISD)
Paper No(s)/Mail Date 3/27/2009, 7/11/2005
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figures 1-5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Arc Shaped Mode Door for Automobile Air Conditioning System.

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phrasology often used in patent claims, such as "means"

and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it uses phrases which can be implied (The present invention relates to....). Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
8. Claim 1 line 8 recites "side apertures individually formed on an upper surface of the outer circumferential wall" and then in line 10-11 recites "connectors for connecting the outer circumferential wall and the rotating shafts to thereby define side apertures". It is unclear as to how these two "side apertures" relate to each other rendering the claim indefinite.
9. Claim 1 line 16 recites "the side apertures". It is unclear as to which side aperture this is referring back to, rendering the claim indefinite.
10. Claim 4 recites "the side apertures". It is unclear as to which side aperture this is referring back to, rendering the claim indefinite.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-5 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Sumiya et al (JP-08020218A).

Sumiya et al teaches:

Re Claim 1. An air conditioning system for automobiles (Paragraph 0001) including an air conditioning case (ref 10) that has a center opening (ref 6 in figure 10), side openings (ref 6a in figure 10), a defrost opening (ref 7 in figure 10), and a floor opening (ref 5 in figure 10) formed therein, and a mode door (ref 9) that is mounted in the air conditioning case and that opens and closes the openings depending on a mode (Paragraphs 0007, 0012, 0028), wherein the mode door is a rotating door comprising:

rotating shafts (ref 91b, 92b, 93b in Figure 4) rotatably supported on two side walls of the air conditioning case; an outer circumferential wall (ref 91d in Figure 4) extended in the direction of the rotating shafts; a center aperture (ref 91) and side apertures (ref 91c in Figure 4) individually formed on an upper surface of the outer circumferential wall; connectors (ref 91a in Figure 4) for connecting the outer circumferential wall and the rotating shafts to thereby define side apertures; and an air inflow opening (ref 91e in Figure 4) formed to allow the introduction of air between the outer circumferential wall and the connectors (Paragraphs 29-31),

wherein paths communicating with the side apertures are formed in the air conditioning case such that air introduced into the mode door is constantly discharged through the side openings (ref 6a) via the side apertures (ref 91c) (Figures 10 and 11 show that air can constantly be discharged through the side passages, Paragraphs 44-47).

Re Claim 2. The air conditioning system of claim 1, wherein the paths are formed by extending the side openings (ref 6a in Figure 10) outwardly in the direction of a length of the mode door (Figure 10 illustrates that the side openings are extended outwardly, Paragraph 00028, 00044-0045).

Re Claim 3. The air conditioning system of claim 1, wherein the outer circumferential wall of the mode door is substantially in the shape of a circular arc (Figure 4 illustrates that the door is arc shaped, Paragraph 0008, 0029).

Re Claim 4. The air conditioning system of claim 1, wherein the side apertures are formed adjacent to both sides of the center aperture (Figure 4 illustrates that side apertures are located on either side of the center aperture, Paragraph 0029-0031).

Re Claim 5. The air conditioning system of claim 1, wherein air leakage preventing means (ref 14) is provided in the mode door and the air conditioning case (Paragraph 29-30).

Re Claim 9. The air conditioning system of claim 1, wherein a door cover (ref 10) is included on the outer circumferential wall of the rotating door, the door cover including ventilation apertures communicating with each of the center opening and the side openings (ref 6 and 6a), ventilation apertures communicating with the defrost opening (ref 7) and the floor opening (ref 5), a sealing member (ref 14) mounted to a surface of the door cover contacting the outer circumferential wall of the rotating door, and fixing means secured to an inner area of the air conditioning case (Paragraphs 7-8 and 11-12).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sumiya et al (JP-08020218A) in view of Ozeki et al (US2002/0084058A1).

Re Claim 6. Sumiya et al teaches a sealing means but fails to specifically teach at least one coupling part and at least one receiving part for receiving the at least one coupling part, the at least one coupling part and the at least one receiving part being formed in side surfaces of the mode door and opposing surfaces of the air conditioning case. Ozeki et al teaches at least one coupling part (ref 22) and at least one receiving part (ref 21) for receiving the at least one

coupling part, the at least one coupling part and the at least one receiving part being formed in side surfaces of the mode door (ref 11) and opposing surfaces of the air conditioning case (ref 7) (Figure 8, Paragraphs 37-39). In view of Ozeki et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of invention to use pins and grooves to help seal a mode door because it allows for precise movement of the door, which allows for a tight seal (Paragraph 39).

Re Claim 7. Sumiya et al fails to teach that the at least one coupling part is a protrusion formed in the side surfaces of the mode door, and the at least one receiving part is a groove formed in the air conditioning case to receive the protrusion of the mode door. Ozeki et al teaches that the at least one coupling part is a protrusion (ref 22) formed in the side surfaces of the mode door, and the at least one receiving part (ref 21) is a groove formed in the air conditioning case to receive the protrusion of the mode door (Figure 8, Paragraphs 37-39). In view of Ozeki et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of invention to use pins and grooves to help seal a mode door because it allows for precise movement of the door, which allows for a tight seal (Paragraph 39).

Re Claim 8. Sumiya et al fails to teach that the least one coupling part is a stepped portion formed in the side surfaces of the mode door, and the at least one receiving part is a groove for receiving the stepped portion of the mode door. Ozeki et al teaches that the least one coupling part is a stepped portion (ref 22) formed in the side surfaces of the mode door, and the at least one receiving part (ref 21) is a groove for receiving the stepped portion of the mode door

(Figure 8, Paragraphs 37-39). In view of Ozeki et al's teachings, it would have been obvious to one of ordinary skill in the art at the time of invention to use pins and grooves to help seal a mode door because it allows for precise movement of the door, which allows for a tight seal (Paragraph 39).

15. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sumiya et al (JP-08020218A) in view of Kamiya et al (US5720657).

Re Claim 10. Sumiya et al fails to teach the fixing means are protrudent fixing pins formed from side walls of the door cover. Kamiya et al teaches fixing means that are protrudent fixing pins (ref 91i) formed from side walls of the door cover (Figure 4, Column 6 lines 30-40). In view of Kamiya et al's teachings it would have been obvious to one of ordinary skill in the art at the time of invention to include pins as fixing means since it allows for a secure connection to the wall and would only have taken routine skill in the art to implement.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Izumi (US4216822) teaches an airflow distributing device for automotive air-conditioning system that has constant side air discharge vents. Schambre et al (US6113483) teaches a variable mode air distribution system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRAVIS RUBY whose telephone number is (571)270-5760. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Jules or Cheryl Tyler can be reached on 571-272-6681 or 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Travis Ruby/
Examiner, Art Unit 3744

/Frantz F. Jules/
Supervisory Patent Examiner, Art Unit 3744